TOTAL
Total Petroleum, Inc.

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BENJAMIN E. WHITE, P. E.
ENVIRONMENTAL ENGINEER

October 4, 1984

Mr. Robert Basch, District Supervisor
Hazardous Waste Division
Michigan Department of Natural Resources
P.O. Box 30028
Lansing MI 48909

Dear Mr. Basch:

This is to inform you concerning the details of the system that we are using to reclaim oil and to generate and temporarily store our oily wastes.

Enclosed is a flow diagram and a narrative description of our oil reclaiming system. These enclosures describe a system for centrifuging oil-water emulsions plus a two-step settling and oil reclamation process. Upon its removal from the second long term decanting process stage the remaining sludge is waste. This waste is either stored in the tank labeled, on the flow diagram, as "Waste Storage" or pumped directly into a waste hauling vehicle. No wastes are stored, in the waste tank, for more than 90 days and all of the waste sludges are transported to a licensed waste treatment facility.

We trust that this information adequately describes our oil reclaiming system. If you have any questions please contact us.

Sincerely,

Benjamin E. White

Benjamin E. White

BEW:djw
cc: Gloria Taylor, DNR
encl.

TOTAL PETROLEUM, INC.

ALMA REFINERY

OIL EMULSION RECLAMATION

Process Description. (See attached flow plans)

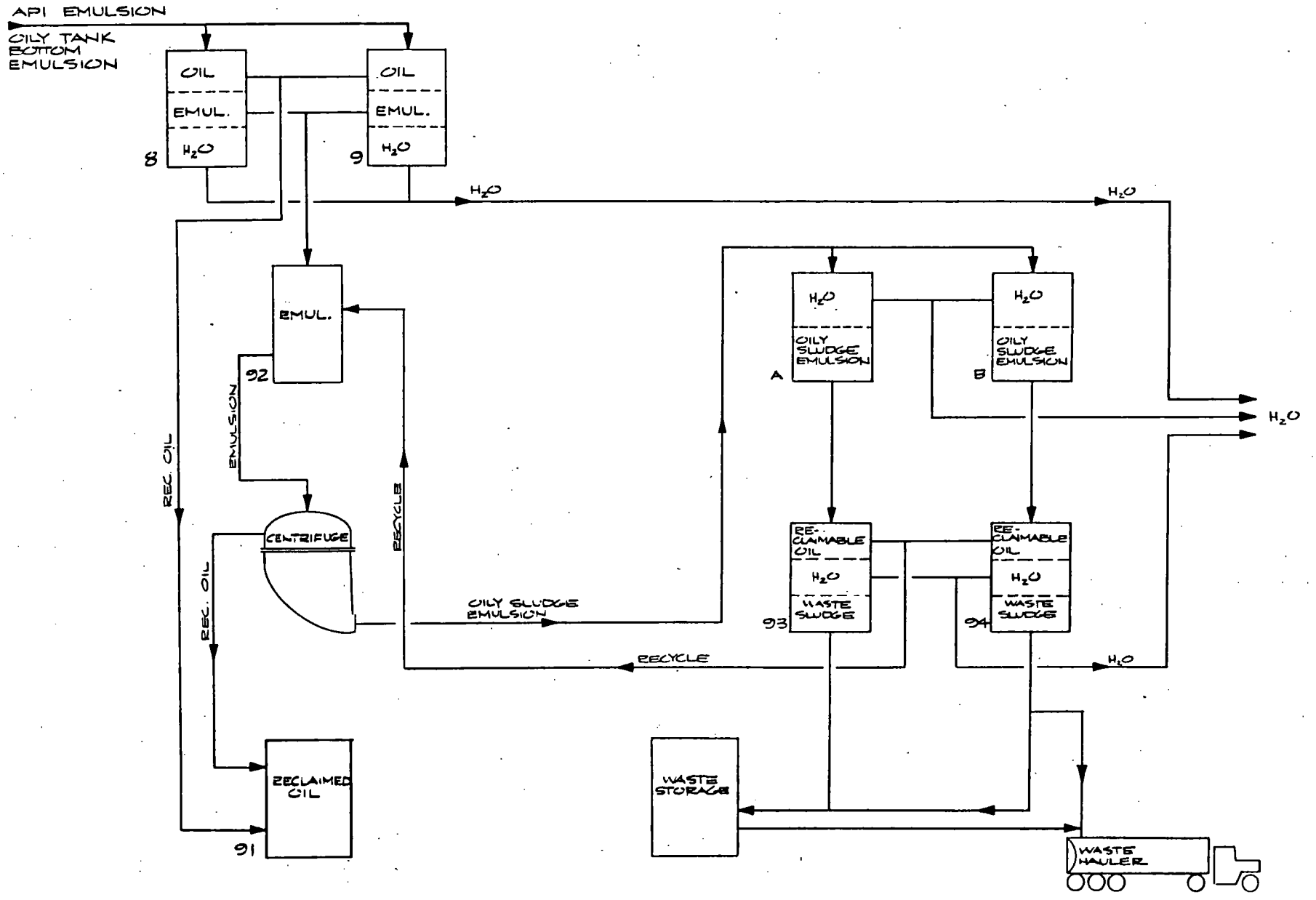
High oil content emulsions from A.P.I. separators and tank bottom emulsions are pumped to oil reclaim process tanks for decanting of separable water and preparing the emulsions for centrifuge separation. These process tank numbers 8, 9 and 92 have a combined capacity of 32,500 barrels.

The oily emulsions can be heated, mixed and circulated in these tanks for separation of any free oil or water that may break out. Separable waters are withdrawn to the A.P.I. separators, any free oil is returned to oil storage or 91 tank. The remaining oil emulsions are transferred to 92 tank where it is continuously mixed for processing through the centrifuge for separating the oil portion from the water and sediments.

The separated oil portion from the centrifuge is pumped to 91 tank for storage. This oil is returned to the refinery tanks for further processing after analysis is received from the lab.

The sediments and water mixture from the centrifuge are pumped to the 1st stage decanting (short term) tanks A&B. These tanks are alternated as receiving tanks and are allowed to set idle for short periods so some gravity separation of sediments can be accomplished. When this initial separation takes place, water is withdrawn along with a small amount of free oil to the A.P.I. separators. The semi-concentrated sediments are pumped to the 2nd stage decanting (long term) tanks 93 and 94. When the mixture cools and separation takes place, the sediments will concentrate at the bottom of the tank, clear water will accumulate above the sediments with oil collecting on top. The water is pumped overhead to the A.P.I. separators, the oil layer is pumped to the oil reclaim tank 92 for recycle.

When a level of concentrated sediments has accumulated, these sediments are trucked to a waste disposal or they can be pumped to C tank for short term storage and then be trucked away.



TOTAL
Total Petroleum, Inc. — Alma, Michigan

TITLE: OIL EMULSION RECLAIMATION FLOW DIAGRAM

DRWN	DATE	SCALE	LOCATION
S LAST	7-94	—	ALMA REF.
CHK'D.	DATE	PROJECT	
APP'D.	DATE	DWG. NO.	REV.

REV	DATE	DESCRIPTION	DWN	CHK	APP.